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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,515	09/29/2006	Gerhard Bock	3717483-00083	1134

22879 7590 08/03/2011
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EXAMINER

REILLY-DIAKUN, JORI S

ART UNIT	PAPER NUMBER
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2878

NOTIFICATION DATE	DELIVERY MODE
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08/03/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/599,515	Applicant(s) BOCK ET AL.	
	Examiner JORI S. REILLY-DIAKUN	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Applicants' communication filed (Amendment) on 17 June 2011. In virtue of this communication, Claims 3-6 are currently presented in the instant application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima (Pub. No.: US 2002/0122217 A1).

With respect to Claim 3, Nakajima discloses, in Fig. 21, an optical scanning system for projecting a laser comprising an oscillating mirror (movable mirror; see Fig. 21), a laser light source (laser diode 2411), wherein a projection light bundle is produced starting from the laser light source using the oscillating mirror (see Fig. 21), and at least one light sensor (photodiodes 2406, 2407) is arranged at an edge region of the projection light bundle to detect a modulated brightness level (see Fig. 21; wherein photodiodes detect brightness/intensity and wherein the brightness is modulated by the laser diode 2411), and a control circuit that uses a counter to determine a position of the oscillation mirror and a specific characteristic of the modulated brightness level (see Page 13, [0145], Lines 24-39; wherein the photodiodes 2406, 2407 detect

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the position of the scan mirror using the modulated brightness level, record and count the registry of a characteristic of the modulated brightness level, particularly intensity, and use said information to monitor the oscillation status and correct the optical scanning function; further see Examiner Response below regarding reasonable interpretations of “a counter”, Applicant’s Remarks [Page 6] regarding the admitted teachings of Nakajima, and Page 13, [0145]- Page 14, [0148] of Nakajima).

With respect to Claim 4, Nakajima further discloses that the brightness of the projection light bundle is modulated at least in a partial region of an image to be projected and that the position of the oscillating mirror is determined by correlating the modulation of the projection light bundle with a detector signal from the at least one light sensor (see Page 13, [0145]-[0146]; wherein the brightness of the projection light bundle is modulated at in the region of projection and wherein photodiodes register the modulated brightness and correlate the registry of said modulated brightness with the modulation performed by the control circuit on laser diode 2411 thereby determining the position of the oscillating mirror and the behavior thereof).

With respect to Claim 5, Nakajima discloses, in Fig. 21, a method of operating an optical system for projecting with a laser comprising modulating a brightness level at least in a partial region of an image to be projected in the projection system (see Page 13, [0145]-[0146]; wherein the brightness is modulated by the laser diode 2411), obtaining a modulated brightness level and using said modulated brightness level for determining an oscillation status of an oscillating mirror, a position of the oscillating mirror, and a specific characteristic of the

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modulated brightness level obtained from light sensor using a control circuit that uses a counter (see Page 13, [0145], Lines 24-39; wherein the photodiodes 2406, 2407 detect the position of the scan mirror using the modulated brightness level, record and count the registry of a characteristic of the modulated brightness level, particularly intensity, and use said information to monitor the oscillation status and correct the optical scanning function; further see Examiner Response below regarding reasonable interpretations of “a counter”, Applicant’s Remarks [Page 6] regarding the admitted teachings of Nakajima, and Page 13, [0145]- Page 14, [0148] of Nakajima).

With respect to Claim 6, Nakajima further discloses that the position of the oscillating mirror is determined by correlating the modulation with a detector signal generated from the at least light sensor (see Page 13, [0145]-[0146]; wherein the brightness of the projection light bundle is modulated at in the region of projection and wherein photodiodes register the modulated brightness and correlate the registry of said modulated brightness with the modulation performed by the control circuit on laser diode 2411 thereby determining the position of the oscillating mirror and the behavior thereof).

Response to Arguments

3. Applicant's arguments filed 17 June 2011 have been fully considered but they are not persuasive.

With respect to Claims 3 and 5, as rejected under 35 U.S.C. 112 2nd Paragraph, pursuant to the conversation between Examiner and Applicant regarding the feature “a counter”,

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which is contended to have support by [0037]-[0038] of Applicant's specification (generally detailing that the "modulation [which can be a random pattern or else a regular signal with a specific characteristic] is controlled in the control circuit 7" and that the characteristic "can here be determined, for example, by a counter content or line number"), *Examiner has withdrawn the rejection under 35 U.S.C. 112 2nd Paragraph*. However, Examiner respectfully submits that, based on the generality of [0037]-[0038] as to the specific steps of control performed by the claimed counter (constituting based on Applicant's contention a control circuit 7 comprising a counter content), the reasonable interpretation of scope for "a counter" is determined to be the broadest reasonable interpretation of "a counter" processor component as understood by one of ordinary skill in the art (*see Remarks filed 07/13/2010 wherein Applicant acknowledges, to overcome the rejection under 35 U.S.C. 112 1st Paragraph, that the "control circuit [7] that is capable of performing the counting function" is disclosed by [0037]-[0038] and that "Although the use of a counter in the combination as claimed is not well known, **control circuits capable of counting are well known to persons of ordinary skill in the art**"*). This constitutes a variety of reasonable interpretations of "control circuits capable of counting", including, a "programming counter" provided to a processor which is determined to be "a variable that is used to keep track of anything that must be counted", a "electronic counter" provided to the control circuit which is determined to be "a circuit that counts pluses and generates an output at a specified time", "a circuit that records the number of occurrences of events", "a circuit for detecting or counting ionized particles or photons", or "a circuit that acts as a scaler", or a "computer counter" provided to the control system which is determined to be "a register or storage location used to represent a number of occurrences of an event". Further, Examiner notes that these are only a

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sample of possible definitions of a “counter” as reasonably understood by one of ordinary skill in the art.

With respect to Claims 3 and 5, Applicant asserts that, with respect to the rejection under 35 U.S.C. 102(b), Nakajima is deficient in that it teaches at least one light sensor and a control circuit “[detecting] a light beam on both sides of the image recording region” and “[measuring] a time difference between the detection signals on both sides of the image-recording region”, and then using “the measured time to determined the width of the scan for correction if the time difference varies more than a certain amount” rather than the claimed at least one light sensor and a control circuit “that uses a counter to determined a position of the oscillating mirror and a specific characteristic of the modulated brightness level”. Examiner respectfully accepts Applicant’s understanding of [0145]-[0148] of Nakajima as cited above but respectfully disagrees with Applicant’s conclusions regarding the deficiencies. As set forth above regarding the reasonable interpretations of “a counter” based on the generalities of Applicant’s disclosure as to the explicit intended functional steps of said “control circuit 7 [determining the characteristic]...by [for example] a counter content or line number”, Examiner notes that at least (but not limited to) a control circuit arranged to use “a variable that is used to keep track of anything that must be counted [a counter; see above]” encompasses the teachings of “the measured time to determined the width of the scan for correction if the time difference varies more than a certain amount” (wherein in Nakajima the variable is time and detections of light energy at particular points in time). Thus, Examiner respectfully submits that “a counter to

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determine a position of the oscillating mirror and a specific characteristic of the modulated brightness level” (and the associated method) as claimed is taught completely by Nakajima.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JORI S. REILLY-DIAKUN whose telephone number is (571)270-7555. The examiner can normally be reached on 7:30 AM to 5 PM EST, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. R./
Examiner, Art Unit 2878
07/21/2011

/Tony Ko/
Primary Examiner, Art Unit 2878